the astrogram

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National Aeronautics and Space Administration • Ames Research Center, Moffett Field, California

New Ames Director of Administration

LOUIS H. BRENNWALD

Louis H. Brennwald, former Vice President of Northrop Aircraft Corporation in charge of Puerto Rico operations, has assumed his new duties as Director of Administration for Ames Research Center.

For the past 23 years Mr. Brennwald has been associated with the aircraft and missile industry. Eighteen of those years were spent with Northrop where his career covered a broad spectrum in engineering administration and management. He has planned and executed a variety of aeronautical and space systems efforts for the Corporation, including supervision of early test activities of the Snark Missile Weapon System at Alamagordo, New Mexico, and Cape Canaveral, Florida. One of the most exacting assignments was as Program Manager of Northrop's subcontract work for Boeing on the 747 aircraft.

In his last position with Northrop Mr. Brennwald managed airport development activities in Puerto Rico under a planned joint-venture with the Ralph M. Parsons Co. He prepared the preliminary plans for the joint venture agreement and conducted liaison and coordination activities with the FAA, various Puerto Rico government agencies and the major airlines. He was also responsible for the overall administrative framework of the operations.

Mr. Brennwald comes to his first government assignment with a keen understanding of technical support services operations, especially as they relate to NASA Centers. Direction of contracts for several of Northrop's programs of this type has given him an intimacy with most of the NASA Centers. Not only is he familiar with their operations and missions, but their problems as well.

He talked recently about his new assignment at Ames and assesses his Directorate as "principally a service organization". He said, "Our objective is to perform services to the satisfaction of the people to whom we provide them. We will do some self-examining and if there is a better, or more efficient system, we will work it out together."

Mr. Brennwald, 49, was born in Chicago, Illinois, but moved to Southern California at an early age. He attended preparatory school in Switzerland and was graduated from the University of California at Berkeley with a B.S. degree in electrical engineering. Following his graduation from the university he was commissioned in the U.S. Navy Reserve and while on active duty he attended the Harvard University Graduate School of Business Administration. More recently he participated in the executive program at the UCLA Graduate School of Business Administration.

His professional affiliations include Associate Fellow of the American Institute of Aeronautics and Astronautics.

Mr. Brennwald and his wife, Laura, and their two children, Lisa, 14 and Larry 12, will make their home in Saratoga.

Conference at Ames on Handicapped

"Technology and the Neruologically Handicapped", is the subject of a conference to be held at Ames Research Center September 8-10.

Ames and the United Cerebral Palsy Research Foundation will sponsor the conference. General Chairman is Dr. Lee Arnold, Chairman and Professor, Dept. of Aeronautics and Astronautics, New York University. Dr. John Billingham, Chief, Biotechnology Division, is coordinating the program at Ames.

Conference attendees will explore applications of aerospace and other recent technological advances in solving problems of neurological disorders.

Space Technology Aids Heart Patients

A unique approach to solving significant medical problems in heart disease will be employed by a newly-formed Stanford University NASA research team.

This Biomedical Technology Transfer Team (BATeam) will apply aerospace technology generated by NASA to major problems in the field of cardiology.

The team, based at Stanford's School of Medicine, is under the direction of Dr. Donald C. Harrison, Chief of the Division of Cardiology.

Under NASA contract, the project is part of NASA's Technology Utilization Program.

The Stanford group, the fourth biomedical team established throughout the country, is the first to be formed at a leading school of medicine.

The Stanford program is also unique in that it will, for the most part, concentrate on problems in only one area - cardiovascular medicine.

Several major medical centers on the West Coast will be contacted to obtain significant problems to work on which may be solvable by NASA technology.

The team will consist of five medical consultants and two administrative staff members from the Medical School, as well as five aerospace engineering consultants.

The engineering consultants are retired Ames employees Andre ("Jeff") G. Burk, James A. White, Manley J. Hood and Jess ("Sam") S.W. Davidsen, and Paul E. Purser, retired from NASA's Manned Spacecraft Center.

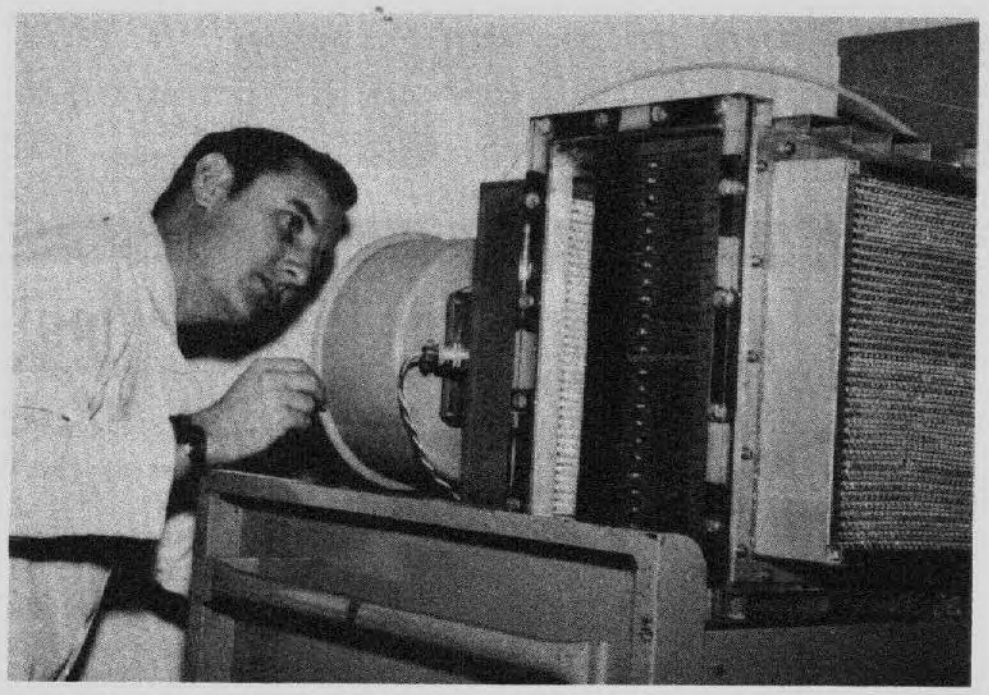
Deputy director of the program is Harry Miller, research associate and business manager of the division.

NASA currently has eight special teams charged with identifying individual problems and proposing solutions based on aerospace technology. Four of the teams concentrate on biomedical activities in public health, medical research, and clinical medicine.

The new program will increase

(Continued on Page 3)

HONORED AS A NASA NOMINEE . . . for the 1971 Federal Woman's Award was Ames research scientists Mrs. Marcelline C. Smith of the Illiac Project Office. Here she and Loren G. Bright, Director of Research Support, view the Certificate of Nomination presented by the Board of Trustees who administer the Award. This is the first government-wide award established exclusively for the purpose of honoring top-caliber career women in government who have made, and are making, outstanding contributions to the quality and efficiency of the Federal career service. Mrs. Smith was cited for her contributions to Ames in developing the requirements for and implementing the installation of one of the most effective research-oriented computer facilities in the Federal Government.



WATER VAPOR MAKES HYDROGEN AND OXYGEN . . . A prototype water vapor electrolysis system developed at Ames reclaims oxygen from water vapor in the air. Dr. Theodore Wydeven, Environmental Control Research Branch, research scientists and developer of the new system, breathes oxygen-enriched air exhausted at the back of the machine. The prototype machine shown here can produce enough breathing oxygen, about two pounds daily, for one person. Although the unit was developed as a possible life support system for future space missions, it has potential for medical and industrial applications. (Lee Jones photo)

Oxygen Reclaimed from Water Vapor

Astronauts on future space missions may breathe oxygen reclaimed from moisture in their own breath and perspiration.

A prototype water vapor electrolysis system developed here at Ames by Dr. Theodore Wydeven, Environmental Control Research Branch, has successfully completed more than 2,000 hours of testing, a period equivalent to an 80-day space mission. The new system converts moisture in the air directly into hydrogen and oxygen and releases the reclaimed oxygen back into the air.

The average person breathes about two pounds of oxygen daily, but he puts back into the air about three pounds by expiration and perspiration. The extra pound comes from water taken into the digestive system by eating and drinking.

The Ames conversion system, when fully perfected, may mean that bulky and heavy tanks of breathing oxygen will be unnecessary on future long-duration space missions. It would have the additional advantage of reducing the load on humidity control equipment by removing excess water vapor from the cabin atmosphere.

Dr. Wydeven, a research scientist in the Life Sciences Directorate, points out that "although the water vapor conversion system was conceived in research for future space missions, it has potential usefulness in other areas. In aviation, it might be used as an on-board oxygen system; in medicine, it might be a portable oxygen generator for hospitals and homes; and it might be a commercial air conditioner and freshner in mines and caves, air raid shelters, or any place where air might need oxygenation."

Tests indicate the system is capable of high reliability and would be suited for use in a regenerative life support system. It has only one moving part, an electric fan which pulls air across a sponge-like material which holds an acid electrolyte. The acid absorbs moisture from the air, and when electric current is passed through it, the water in the acid solution is electrolyzed or broken down into its basic components. Oxygen is liberated on one side of the cell, hydrogen on the other. A microporous membrane prevents intermixing of the two gases.

In space craft cabin application, the oxygen would be put into the cabin airstream for breathing, and the hydrogen either used for spacecraft systems or jettisoned into space.

Dr. Wydeven's unit used in the basic development program produces enough oxygen to sustain one man. It measures about 15 inches square and 27 inches deep. Another package, approximately the same size, contains the power supply and electronic controls. Dr. Wydeven believes a light weight unit could be built which would weigh about 35 pounds and take up 1.3 cubic feet of space, including the control and power supply system.

Sixth Aerospace Symposium at Ames

The 6th Aerospace Mechanisms Symposium will be held at Ames, September 9 and 10. This is the only symposium in the United States devoted exclusively to the interchange of information relative to aerospace mechanisms. Sponsors for the symposium are Ames, Lockheed and the University of Santa Clara.

Charles A. Hermach, Reproduction Services, is the Ames Symposium Chairman. J. Lloyd Jones, Research Assistant to the Director, will act as Master of Ceremonies at the Symposium Luncheon.

Among the participants will be, Louis Polaski, Vehicle Guidance and Control, and John E. Hewitt, Experiment Development Office, who will conduct a morning session September 9 on "A Space Qualified Radiation Source Holder."

Dimeff to Chair 1972 Conference

John Dimeff, Chief of the Instrumentation Branch at Ames, has been named chairman of the Executive Committee for the 1972 Research Conference on Instrumentation Science.

The Conference, sponsored each year by the Research Committee of the Instrument Society of America, is held at Hobart and William Smith Colleges in Geneva, New York. The objectives of the week-long scientific meeting are to stimulate instrumentation research in universities, research organizations and governmental and industrial laboratories through informal meetings comprised of discussion groups and presentations.

Attendance at the Conference is by application or invitation and is limited to 100 persons. This small group of participants allows a free and informal exchange of ideas and extends the frontiers of instrumentation science. The programs provide timely state-of-the-art information in actively developing fields and are planned to bring experts up to date on the latest instrumentation applications.

Quiet STOL Program Office Formed

NASA has formed a new office within its Office of Advanced Research and Technology to provide program management for the Experimental STOL Transport Research Airplane.

The new Transport Experimental Programs Office will exercise program direction of the planned quiet STOL aircraft. Major airframe manufacturers were asked by NASA early last month to submit proposals for the design and fabrication of the aircraft by October 15.

The aircraft will be used in a flight research program intended to provide the technical data and experience for developing environmentally acceptable, economical and safe fan-jet STOL transport systems.

Gerald G. Kayten will direct the new office, reporting to the Associate Administrator OART, Roy P. Jackson.

In making the announcement, Jackson stated, "This new office, in addition to providing internal program management, will act to strengthen NASA's relationships with the Department of Transportation, the Federal Aviation Administration, and the U.S. Air Force with respect to the STOL program."

Related activities that had been underway in the STOL Technology Office and the Supercritical Technology Office were integrated into the newly established Office.

Project responsibility for the Experimental STOL Transport Research Airplane was assigned to Ames Directorate of Aeronautics and Flight Systems headed by Dr. Leonard Roberts. The research and technology effort will be conducted under the direction of Woodrow L. Cook, Chief of the V/STOL Projects Office at the Center. Elements of the work will be assigned by the Ames Project Office to the Flight Research Center, including flight research cooperations; to Lewis Research Center, including propulsion research; and Langley Research Center, including wind tunnel testing.

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Thursday between publication dates

The Evolution of the Universe

NASA/Ames-Stanford-Lick Observatory
Joint Colloquium Series

NASA/Ames Research Center Main Auditorium, Building N-201

Tuesday	**7 Sept.**	**7:30 PM**	**EVOLUTION OF THE GALAXIES** Professor A. G. W. Cameron, Belfer Graduate School of Science, Yeshiva University
Tuesday	**14 Sept.**	**7:30 PM**	**BLACK HOLES AND GRAVITATIONAL WAVES** Professor Kip S. Thorne, Division of Physics, Math, and Astronomy, California Institute of Technology
Thursday	**16 Sept.**	**7:30 PM**	**EXPERIMENTAL TESTS OF GENERAL RELATIVITY** Professor William M. Fairbank, Dept. of Physics, Stanford University
Tuesday	**21 Sept.**	**7:30 PM**	**CONCLUSIONS** (speaker to be announced)

PROGRAM OPEN TO ALL AMES EMPLOYEES AND THE GENERAL PUBLIC

HOISTING DAYS AT AMES . . . are over for Leland (Lee) J. Goularte, Metals Fabrication Branch, who retired recently after 20 years at the Center. Lee, as a master rigger, has been a familiar figure as he maneuvered the cumbersome mobile crane throughout the Center. He was especially noted for his ability to place a model in the test section of the 40-by80- Foot Wind Tunnel -- pinpointing the site without visual contact. He was equally adept at setting up intricate exhibits for public display wherever the commitment dictated. To remind him of this achievement a handmade model of the crane with cargo (shown here) was one of the gifts presented during a farewell party in his honor. Some 120 friends and fellow workers gathered to wish Lee well and watched with pleasure as he received a much-wanted chain saw. This will get plenty of use around his retirement home located in the Sierra at Twin Bridges. (Lee Jones photo)

Job Leads for RIFd Employees

Reduction-in-force notices were issued two weeks ago on August 16 to 78 Ames employees in several job categories. Included in the group mechanics, craftsmen, electronic and engineering technicians, aerospace engineers, electronic, electrical and materials engineers, physicists, mathematicians, and physiologists.

Any job leads through friends, neighbors, clubs, associations, churches, etc., for those in the categories listed may be reported to Jeanette Remington, ext. 2022. The more leads the Personnel Division has, the better the prospects will be for finding jobs for those employees who are scheduled for reduction-in-force on October 2.

BATEAM FORMED

(Continued from Page 1)

the joint research efforts of Stanford and Ames. As lead NASA center in life sciences research, Ames will be a key technology resource for the new team.

Dr. Harrison and his staff have worked closely with Ames for the past several years, with many clinical innovations resulting. In April, a Stanford-Ames team devised a computer system to watch a movie of the beating of a patient's diseased heart-identifying dead spots or scar tissue in the heart wall, aneurysms and other malfunctions.

MINORITY FIRM CONTRACT . . . Officials of Dunbar Systems, Inc., of Palo Alto, Ames Research Center and the Small Business Administration, sign a new federal contract with the minority-owned and operated firm. Alvin S. Hertzog, (left), Chief of Ames' Procurement Division, will administer the contract for Clifford D. Ryan (right), Procurement Chief for the SBA, under a special provision which allows the SBA to negotiate federal contracts with qualified minority firms without competitive bidding. Charles A. Jones, Vice-President of Dunbar, signed for the firm. The contract for $25,000 is to provide Ames with computer software services in support of the Center's role to develop advanced aeronautics and space technology. (Lee Jones photo)

Public Affairs Staff Aids Apollo Mission

Two of the Ames Public Affairs staff, Larry King and Kathy Stimson, worked "behind-the-scenes" during the Apollo 15 mission to insure smooth operations.

Mr. King was the NASA Senior Public Affairs Representative on the recovery ship, the U.S.S. Okinawa. As such, he was responsible for the coordination of all press coverage of the recovery.

Commenting on the Russian troweller which hovered near the Okinawa throughout the recovery, Mr. King said; "They were very cooperative." He added that they sent over a congratulatory message when the astronauts had been safely brought aboard which was "sincere and complimentary."

Mrs. Stimson acted as protocol officer in the home of Brig. Gen. Tom Scott, USAF ret., and Mrs. Scott, in La Jolla. It was her responsibility to cushion the Scotts, parents of astronaut David R. Scott, from outside distractions during the mission by answering their phones, questions and handling the press.

Calendar of Events

TECHNICAL PAPERS

Sept. 13-15--E.J. Hopkins, AGARD Specialists' Meeting on Turbulent Shear Floras, London, England.

Sept. 28-Oct. 1--S.B. Anderson, AGARD Flight Mechanics Panel Meeting on Handling Qualities Criteria, Ottawa, Canada.

Sept. 20-25--D.P. Williams, XXII Astronautical Congress, Brussels, Belgium.

Sept. 20-25--J.C. Arvesen, XXII International Astronautical Congress, Brussels, Belgium.

Sept. 27-29--L.B. Hoffman, International Telemetring Conference, Washington, D.C.

Ames Airings

. . . by Jeanne Richardson

NOTE: Hottest item in the paper this issue is at the bottom of the Want Ads.

A couple of weeks ago 39 of Ames' Oakland A's fans climbed in a bus and headed for the Boston-A's game at the Coliseum. The trip, arranged by the ARA, was a huge success even though the A's lost, 1-0. The group had a good view of Vida Blue's pitching performance. They sat on the second tier just left of home plate.

Among those cheering for the home team were; RALPH SHAW-LEE, Fiscal; LEROY SCHEIBER, Thermal Protection; LOU POLAS-KI, Vehicle Guidance and Control; and CARDY MACON, Records Management.

Meanwhile, back at Ames . . . With all the recent memos and announcements going out, confusion has occasionally set in. Part of the problem lies in the lack of lexicographers to give us clear definitions of our fast-changing administrative jargon. To help bridge the gap between lagging lexicon and the language as she is spoke, the following glossary is contributed gratis (for nothing).

A CONFERENCE-A group of people who, individually, can do nothing, but as a whole they can meet and decide that nothing can be done.

TO SPELL OUT-To break big hunks of gobbledegook into little hunks of gobbledegook.

SYNTHESIS-A compounding of detailed bewilderment into a vast and comfortable confusion which offends no one.

A SURVEY IS BEING MADE OF THIS We need more time to think up an answer.

REFERRED FOR APPROPRIATE ACTION-Maybe you know what to do with this.

POINT UP THE ISSUE-Expand one page to fifteen.

UNDER CONSIDERATION-Never heard of it.

UNDER ACTIVE CONSIDERATION-We're looking in the files for it.

CHANNELS-The trail left by an interoffice memo.

A PROGRAM-Any assignment that can't be completed by one phone call.

INCENTIVE PROGRAM-A scheme to titillate a submerged urge.

STATUS QUO-The mess we're in.

EXPERT-A person who avoids all the small errors as he sweeps forward to a grand fallacy.

ABSURDITY-A statement or belief that's inconsistent with your own opinion.

IMPLEMENT-Do.

FORMALIZE-Write it down.

FINALIZE-Finish it.

STATISTICIAN-A guy who draws mathematically precise lines from an unwarranted assumption to a foregone conclusion.

Art Exhibit at Main Library

An art exhibit of Chinese brush paintings is presently on display in the Ames Main Library and will continue through September 17.

The one-man show is being presented by Mrs. Judy Chiu, a native of Taiwan, China, who has studied under many outstanding Chinese artists. She is a member of the Santa Clara County Artists' Guild and is currently teaching Chinese brush painting in the Los Altos and Santa Clara areas.

CSC WINS AGAIN

The CSC basketball team that finished first in last year's Ames Basketball League, has again proven itself a winner.

On August 19, CSC defeated Intersil, 57 to 48, for the league championship in a Mountain View-sponsored summer basketball program.

Team members include: Dave Jones, Ron Wieland, John Streeter, Bob Deisher, Tom Sacco, Gary Black, Virgil Nolan, Bruce Erickson and Don Baker.

Computer Sciences Corporation (CSC) has been a major contractor at Ames since September 1970.

JOGGERNEWS

On July 31 Jim Woodruff ran the Half Moon Bay to Belmont Marathon, a 26 mile run with some hills, in three hours and 35 minutes. It was a beautiful run from the ocean beach to Skyline, down through Huddart Park, up to the Pulgas water temple, and on over the hills to Belmont, but the runners were relieved to finally reach the finish line at the entrance of Marine World and accept a ride to Belamesa Park where there was a swimming pool for cooling off and relaxing.

On August 14 a seven man Joggernaut team ran in a 72-mile relay race around Lake Tahoe. The Joggernauts were Ted Passeau, who started out at South Tahoe and continued past the Gambling Casinos at State Line, Jim Woodruff, Rudy Dressendorfer, Vito D'Aloia, Dale Shute, Bruce Castle, and Paul Sebesta, who crossed the finish line blowing a colorful party whistle he had cached in a tree a few hundred yards before the finish.

New Location for Discount Cards

All Disneyland, Santa Cruz Beach and Boardwalk, Roaring Camp, Sea World, Frontier Village and miscellaneous discount cards are now available through the Ames Recreation Association (ARA). The ARA also handles special discounts on books, sporting events and special entertainment attractions in the Bay Area.

These services , formerly distributed through "The Astrogram" office, are now available in the Ames Cafeteria and in Building 240, Room 107. ARA Executive Board Member, Peggy Larson, ext. 2936, will be in charge of their distribution. For information contact Mrs. Larson, or visit the display in the Cafeteria.

GOLF

by Kay Bruck

Windswept Sunol Palm Course was the scene for the August Tournament and Snoopy's friends, Co-Chairmen John Hawkins and Russ Cravens, reported the following winners:

First Flight: 1st Place-John Hawkins; 2nd place-Bill Gideon; and 3rd place-Jack Lee.

Second Flight: 1st Place-Larry Graham; 2nd place-Philip Montoya; and 3rd place-Roy Griffin.

Third Flight: 1st Place- Ken Souza; 2nd place-Vance Oyama; Norm Martin and Lee Seegmiller tied for 3rd place.

Fourth Flight: 1st Place-Sal Tardio; 2nd place-Willie Sutton; and 3rd place-Kay Bruck.

Low gross for the day was taken by Ruben Ramos and closest to the pin prize went to Frank Lazzeroni.

The next tournament, on September 11 will be at DeLaveaga, Santa Cruz.

WANT ADS

The Astrogram's ad section is provided as a personal, non-commercial service to Ames employees. Advertiser must be identified by name, extension and organization. The name may be left out of the ad but is needed for records. Ads must be submitted in writing to The Astrogram, N 241-4, by Thursday, a week before publication. The advertiser's home telephone number must be provided as a point of contact except in carpool notices.

AUTOMOBILES

For Sale-1971 VW Squareback, marina blue, 15000 miles, returning to Europe, must sell, call Reiner Onken, 965-0383.

For Sale-Triumph sports car TR-3, 1959 in very good condition, top and Tonneau, R/H, 4-spd., excellent mechanical condition. $700 or best offer, Dave Mendenhall, 257-2738.

For Sale-1955 Chevrolet, new brakes, tires, battery, generator, radiator. Condition, seeing is believing. $300, John B. Klein, 967-9543 after 4:30 p.m.

For Sale-1963 Catalina, $350, 4-dr. HT, PS,PB, clean inside and out, needs no repairs, call Frank Thompson 379-2385.

Wanted-Utility 2wheel trailer, approx. 1 ton cap., call W.E. Kyle, 258-8295.

For Sale-1970 Datsun 510, 2-dr., lo mileage, radio, $1575, 736-2696.

HOUSING

For Rent-Tahoe City cottage near lake and private beach area. Sleeps 6. Autumn rate $70/wk or $30/wknd. Post-Labor Day reservations only. 328-4642.

For Sale-40 acres located off Skyline near Palo Alto. All year round stream and trees, $26,000. 948-2987 after 6 p.m.

MISCELLANEOUS

For Sale-Smooth haired Fox Terrier, AKC, registered female, 5 months, good line. Must sell as unable to give her adequate care. Call 967-1443.

For Sale-Tires, used 4-855-15, blond bedroom set, all good condition. Call 252-5596.

Typing-Professional Typing, I.B.M. Executive Typewriter, 16 years experience. 252-3833.

For Sale-RCA 19" TV, b/w, recently overhauled $25; crib with mattress, 3' x 6', excellent condition, $25, call Reiner Onken, 965-0383.

For Sale-Good 1965 Olds 98 convertible, white with powder blue upholstery, $750, 867-0972.

Lost-Ames Library Book; "Phase Gas Chromotography" by Kaiser, QD, 271.K253, V.1, 1963. Please contact Life Sciences Library, 239-13, extension 2141.

For Sale-Miscellaneous pairs of S.F. Opera tickets. Saturday night, Balcony Circle @ $8.25 per seat-Madama Butterfly 9/18 and 10/2, Lulu 11/6, Friday night, Orchestra (5th row center)@ $14-Midsummer Night Dream 10/15, Il Trovatore 10/29, Un Ballo in Maschera 11/5. Series prices. Call Jerry Smith, 961-5993.

Needed-Inexpensive bicycle to buy or loan for month. Contact Bruce Smith x2796.

For Sale-Accordian, 120 bass, concerto, white and gold, good condition, $125. Call W. Ogles 241-8722.

For Sale-Four (4) each Chevy chrome rime 14" x 6" deep, used, $30. Phone 292-2676, Bill.

For Sale-50cc Honda Motor Scooter, 5,000 miles, best offer, call 969-2795.

For Sale-Bunk Beds, maple, wagon wheel style, good condition, $30, 253-9694.

Wanted-Man's bike, 10 speed in good condition. Reasonable. Call Rita, 792-6715 after 2 p.m.

For Sale-Sideboy; old, ornamental, beautiful. Refinished last year. Will sell for cost of refinishing. Gowdey 739-9228.

For Sale-Olympia Electric typewriter, less than 1 year old, $385, 379-2385.

Carpool-Santa Clara carpool needs you. Contact Joe Steinbock, ext. 2292.

For Sale-Olympia "Satellite" model typewriter. Consumers Guides's Best light-weight portable. $40. Call Jill at 246-2044.

Must Sell-Ford Galaxy 500 '65 2d. HT, A/T, P/S, P/B, 87000 mi. good condition. $595. 328-2991 (after 5 p.m.).

Wanted-Driver to deliver 69 Skylark to Cincinnatti Ohio. Expenses paid. EG. Park. 356-7882.

The Ames Ski Club is sponsoring a Ski Swap this month. Anyone interested in selling ski items should contact Jeanne Richardson at ext. 2973.

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National Aeronautics and Space Administration • Ames Research Center, Moffett Field, California

INVENTION AWARDS . . . in recognition of the creative efforts of Ames staff members were presented recently by Dr. Hans Mark (far left), Ames Director. Recipients of the monetary awards approved by the NASA Inventions and Contributions Board were (l to r) Hubert C. Vykukal, Environmental Control Research Branch; Gordon J. Deboo, Roger C. Hedlund, and Robert D. Lee, all of the Electronics Research Branch. (Photo by Lee Jones)

Invention Awards To Staff

The creative efforts of Ames staff members were recognized recently when Dr. Hans Mark, Ames Director, presented invention awards approved by the NASA Inventions and Contributions Board.

The largest of the awards, $600, was presented to Hubert C. Vykukal, Environmental Control Research Branch, for an invention which relates to a space suit. The improved suit has greater freedom of waist and torso movement than was possible in the past and facilitates many stooping and bending operations. The invention is equally adaptable to either hard or soft suits.

Gordon J. Deboo and Roger C. Hedlund of the Electronics Research Branch, shared a $200 award for inventing a self-tuning bandpass filter. The new filter provides narrow band filtering with improved signal-to-noise ratio resolution and works well in a noisy environment. The invention also provides a constant center frequency gain over a wide range of frequencies.

A metallic intrusion detector system invented by Robert D. Lee, Electronics Research Branch, was awarded $50. The system is useful for distinguishing between the presence of ferrous and nonferrous objects in an area from which such objects are proscribed. For instance, it can detect metal particles in foodstuffs such as cereals; or detect guns or other weapons carried by persons passing through an area under surveillance.

CHECK YOUR DECAL!

Ames employees with vehicles registered with a NAS Moffett Field identification sticker are reminded that it is their responsibility to ensure that the decal does not expire.

The date tab is issued for a period of up to three years, depending on the expiration date of the driver's license. Therefore, decal holders are asked to keep track of the expiration date and renew the tab at the Ames Security Office, Room 119, Administration Management Building, 241.

Armstrong Leaves NASA To Teach

Neil Armstrong, the first man to set foot on the Moon, is leaving NASA to join the University of Cincinnati as its first University Professor of Engineering, effective about October 1. He will continue to serve NASA in the capacity of special consultant.

US-USSR Docking Meeting

The USSR Academy of Sciences and NASA have confirmed the results of Joint Working Group meetings held at the Manned Spacecraft Center, on June 21-25, on the development of compatible space rendezvous and docking systems.

The Working Groups considered the technical requirements for compatible systems including the general methods and means for rendezvous and docking, radio and optical reference systems, communications systems, life support and crew transfer systems and docking assemblies.

The Working Groups agreed in principle or in detail on a number of technical solutions and requirements. A number of other problems require additional development and discussion.

Studies will be made of the technical and economic implications of experiments that might be conducted to test the technical solutions for compatible systems. A first such experiment might be the docking of an Apollo-type spacecraft with a manned orbital scientific station of the Soyuz type with an orbital scientific station of the Skylab type.

The Working Groups agreed that further development of mission models should be undertaken to test the suitability of the agreed technical requirements and solutions.

The Soviets provided data on the manned orbital scientific station Salyut and the Americans provided data on Skylab.

The next meeting of the Working Groups is expected to be held in Moscow in late November, hopefully to complete agreement on technical requirements for compatible systems. Professor K.D. Bushuyev and Dr. Glynn S. Lunney were designated respectively to facilitate technical communications between the two sets of Working Groups.

The summary of results of the Working Group meetings was subject to confirmation within two months by the Academy of Sciences and NASA. Dr. George M. Low, Deputy Administrator, has approved the summary of results for NASA and Academician MV. Keldysh has approved for the Academy of Sciences.

Texts of the Working Group minutes are available at NASA Headquarters, Room 6043, 400 Maryland Ave., S.W., Washington, D.C., 20546.

The bilateral Working Groups responsible for this work were established under an agreement signed in Moscow on Oct. 28, 1970 by representatives of the USSR Academy of Sciences and NASA.

Sixth Aerospace Symposium Held

More than 250 aerospace engineers from industry, NASA, and educational institutions attended the two-day "Sixth Annual Aerospace Mechanisms Symposium" held last week, Sept. 9 and 10, at Ames.

The conference, sponsored by Ames, the University of Santa Clara and Lockheed Missiles and Space Co. Inc., was devoted to the interchange of information relative to aerospace mechanisms.

Louis J. Polaski of Ames' Vehicle Guidance and Control Branch, and Harry R. Zabower, Flight Equipment Development Branch, jointly presented a paper entitled "A Space Qualified Radiation Source Holder." Robert E. Mobley, Research Facilities Engineering, spoke on the "36-Inch Airborne Infrared Telescope."

Among other papers presented were two on space vehicle docking mechanisms. A paper by V.S. Syromyatnikov of the USSR was presented on "Docking Devices for Soyuz-Type Spacecraft." The author himself was not able to attend. James C. Jones of Manned Spacecraft Center, presented a paper on the advanced "Neuter Docking Mechanism Study."

The conference was opened by Dr. George G. Herzl of Lockheed, symposium chairman. Participants were welcomed by Glen Goodwin, Ames Director for Astronautics. Charles A. Hermach, Chief of the Materials Research Branch, was the Symposium organizer from Ames.

The Seventh Aerospace Mechanism Symposium will be held in September of 1972 at the Manned Space Flight Center.

Space Technology Aid to Handicapped

The question of applying space age technology to diagnosis, treatment and rehabilitation of neurological disorders was confronted by a group representing Federal and state governments, research institutions and industry meeting at Ames last week, Sept. 8 - 10.

Under sponsorship of the United Cerebral Palsy Research Foundation and NASA, the three-day meeting brought together physicians, scientists, and engineers to survey "Technology and the Neurologically Handicapped."

The sessions were opened by Dr. William Berenberg, Chairman of the United Cerebral Palsy Research Foundation's Research Advisory Committee; Dr. Lee Arnold, Chairman of the Department of Aeronautics and Astronautics at New York University, and Dr. DeMarquis Wyatt, Assistant Administrator for Planning, NASA Headquarters.

Dr. Dayid L. Winter, Deputy Director of Life Sciences at Ames, was co-chairman of the first afternoon's session where technical papers covered such subjects as "Current Theraputic Techniques in Rehabilitation from neurological Disorders", "Problems and Perspectives in Paraplegia", and "Coping with Brain Damage."

Two Ames research scientists presented papers at the Thursday morning sessions. Hubert C. Vykukal, Environmental Control Research Branch, talked on "Exoskeletal Technology", and Melvin Sadoff, Chief of the Man-Machine Integration Branch outlined "Manual Control Theory and Applications."

Dr. John Billingham, Chief of the Biotechnology Division, Coordinated the program at Ames.

"Thank You" Note

A note from Leland (Lee) Goularte, Metals Fabrication Branch, who retired recently after 20 years at the Center, expressed his deep appreciation and thanks for the farewell party in his honor. More than 120 friends and fellows workers gathered to wish him happy days ahead in his retirement and to present him with a much-wanted chain saw, as well as several items that will remind him of his years at Ames.

Since it would be an overwhelming task to thank each person individually, Lee asked that his thanks be expressed through "The Astrogram."

FIRST WOMAN INNOVATOR . . . Miss Bonnie J. Berdahl (left), a chemist in the Life Detection Systems Branch, is the First woman at Ames to receive a NASA Tech Brief Award. Miss Berdahl was co-innovator with Glenn C. Carle and Vance I. Oyama on an "Automatic Amino Acid Analyzer." New technology derived from the U.S. space program is announced through tech briefs and disseminated by NASA Technology Utilization Offices (TUO) to encourage commercial application. Here, C.A. Syvertson, Ames Deputy Director, presents the award check to Miss Berdahl. He was assisted at the ceremony by Miss Esperanza Pereida (center), a summer employee who worked in the Ames TU Office under the Neighborhool Youth Corps Summer Program. (Emerson Shaw photo)

29 Ames Tech Briefs Receive Awards

A miniature implantable ultrasonic system designed to measure heart function data during the cardiac cycle was one of the many innovations submitted by Ames researchers and recognized with a Tech Brief award during a recent ceremony.

NASA Tech Briefs are a means of announcing new technology derived from the U.S. space program. They are published by Technology Utilization Offices throughout the agency to encourage commercial application. Some 29 such briefs published at Ames earned a $25 award for each innovator.

C.A. Syvertson, Ames Deputy Director, presented the awards which included one for the first woman to be recognized in this manner at the Center. Miss Bonnie J. Berdahl, a chemist in the Life Detection Systems Branch was co-innovator with Glenn C. Carle and Vance I. Oyama, on a fully automatic amino acid analyzer. This apparatus operates unattended for periods of up to 15 hours, and nearly doubles the number of amino acid analyses that could previously be completed by one analyst in a single working day.

The other authors and their tech briefs are as follows:

Benjamin H. Beam, Dean N. Jaynes and Clifford Burrous, "Laser Beam Hydrocarbon Detector;" Kent R. Bourquin and Fred H. Shigemoto. "Laser Doppler Instrument Measures Fluid Velocity Without Reference Beam;" Richard M. Brown, "Stabilization of Interferometer Fringe Patterns;" Gordon J. Deboo and Clifford N. Burrous, "A New Solid-State Logarithmic Radiometer;"

Robert E. Dannenberg and Donald E. Humphry, "Electrical Instrument Measures Position and Velocity of Shock Waves;" George R. Grant and William D. Gunter, Jr., "Optical Transducer and Circuit;" Charles C. Kubokawa, "Easy Insert, Easy Release Toggle Bolt Fastener;"

Three awards for Robert D. Lee, "Metal Detector System," "Miniature Implantable Instrument Measures and Transmits Heart Function Data" and "Intruder Detection System;" Elwood R. Leibfritz, Demetrius A. Kourtides, and Manuel J. Fontes, "Molding Procedure for Casting a Variety of Alloys;" Raymond Sun Lim, "Rapid Method for Interconversion of Binary and Decimal Numbers;" Robert M. Munoz, "A Topological Approach to Computer-Aided Sensitivity Analysis;" Fred W. Matting, "Analysis of Surface Ablation of Noncharring Materials;" William A. Page and Ellis E. Whiting, "A New Solid-State Logarithmic Radiometer;"

John A. Parker and Ernest L. Winkler, "Statical Characterization of Phenolic-Novolak Structures;" Kis-Ha-Natham R. Raman, "Subminiature Transducer Measures Unsteady Pressures;" and Larry D. Russell, "High Intensity Heat Pulse Source Operates Without Cooling System."

Exceptions To Freeze Rulings

A recent bulletin from NASA Headquarters pertaining to the present Federal employee wage and salary freeze contains information clarifying the payment of incentive awards.

The Executive Order states that cash awards and within-grade step increases based on performance or merit are frozen. However, honorary awards are not affected by the freeze, nor are cash awards for employee suggestions or inventions.

Job Leads for RIFd Employees

The Personnel Division would like to express its appreciation for the several job leads contributed in behalf of those effected by the Reduction-in-force. Many have led to employment opportunities and placement.

Since a total of 78 are to be effected, many more jobs are needed. Any job leads through friends, neighbors, clubs, associations, and churches, for those in the categories listed below may be reported to Jeannette Remington, ext. 2022. Jobs are needed for; mechanics, craftsmen, electronic and engineering technicians, aerospace engineers, electronic, electrical and materials engineers, physicists, mathematicians, and physiologists.

The more leads the Personnel Division has, the better the prospects will be for finding jobs for those employees who are scheduled for reduction-in-force on October 2.

CELEBRATING SUMMER'S END . . . a group of Summer Aid and Neighborhood Youth Corps (NYC) student-employees are pictured above celebrating the end of a summer's employment at Ames. The combination party and awards assembly was held in honor of the youths by the Ames Recreation Association (ARA).

Summer Work Programs End With Awards

Two summer-work programs at Ames provided 150 local students with jobs this summer. Called the Summer Aid Program and the Neighborhood Youth Corps (NYC) Summer Program, both are federally funded and coordinated through Ames' Employee Development Branch.

The NYC Summer Program, the larger of the two, provides work for high school students between the ages of 16 and 18, with family incomes within a specified range. This is a sister program to Ames' year-round NYC Out-of-School Program.

The Summer Aid Program similarly provides work for high school or college students, between the ages of 16 and 21 whose family incomes fall in a specified range. They are recommended to Ames by their school counselors.

Every effort is made by the Employee Development Branch to match the student-employee's job with his or her academic interests. Whenever possible the students are given an opportunity to gain work experience in their chosen field.

The students' assignments covered a wide variety of interests and projects. They worked in laboratories, the animal colony and the Facilities Services Branch. Others were engineering and math aids or draftsmen. Many of the girls were secretarial assistants.

The NYC Program was conducted in two six-week sessions; the Summer Aid Program in one 16-week session. Coordinator for both programs was Willie L. White, Jr., Employee Development Branch. According to Mr. White; "The program went beautifully. I have had many enthusiastic responses to it."

At a barbeque party and awards presentation several outstanding student-employees and counselors were commended for their exceptional performance this summer. Plaques signed by Ames' Director, Dr. Hans Mark, were awarded to NYC students; Linda Ferne, Connie Bridges and Denise Williams, all of Overfelt High School. The students from the Summer Aid Program who received recognition were; Jennifer Hudson, Ravenswood High School, Linda Chen, Los Altos High School; and Arnulfo Garcia, James Lick High School.

Three counselors for the participating students were also awarded plaques commending them for a job well done. Fred Martin, a teacher at Willow Glen High School during the academic school year received a plaque for his work as NYC In-School Summer Counselor. His assistant, Larry Beck, a freshman at San Jose State College, was also honored. Tom Jones, a graduate student at U.C. Berkeley and California State College at Hayward, as counselor for the Summer Aid Program received recognition also.

Dr.Berry Assumes New NASA Duties

Charles A. Berry, M.D., has been named NASA Director for Life Sciences at NASA Headquarters in Washington, D.C.

Dr. Berry, presently Director of Medical Research and Operations at the Manned Spacecraft Center succeeds James W. Humphreys, Jr., M.D., who left NASA to become secretary-treasurer of the American Board of Surgery in Philadelphia.

Dr. Berry will retain his responsibilities at the Manned Spacecraft Center until his successor has been appointed.

As NASA Director for Life Sciences, Berry will be responsible for the management of all life science activities in the Office of Manned Space Flight, including biomedical and bioscience research associated flight experiment definition, advanced life support and protective systems, man-machine integration and advanced bioinstrumentation. He also will have overall responsibility for integration of the total NASA life sciences program, which includes activities in other NASA offices.

First NASA Quiet Engine Tests

NASA continued its attack on jet aircraft noise as the first ground tests of an experimental, quieter jet engine began recently in southern Ohio.

The full scale test engine was built for Lewis Research Center under a contract with the General Electric Company's Aircraft Engine Group. The initial noise tests will be conducted by GE at its Peebles, Ohio, site.

The goal of the Quiet Engine Program is to develop a 22,000-pound thrust engine that will be 15 to 20 decibels quieter than engines in current subsonic air transports such as the DC-8 and 707 jets.

Project officials hope to accomplish the reduction by use of a high bypass ratio engine with a low noise fan and by installing in the flow passages, a honeycomb-like, acoustic material to muffle sound. To date component tests on candidate fans for the Quiet Engine have shown that it will be possible to meet or surpass this noise goal.

Credit Union 90-Day Special

In cooperation with the President's new economic policy the Moffett Field Employees' Credit Union is offering a "90-Day Special" for financing new automobiles.

The rate during this limited offer period is 3/4 of 1%, or 9% per annum on the following basis:

New cars financed at the Credit Union for the months of September, October and November;

Maximum time of loan is 36 months;

Credit Union will finance 75% of purchase price.

The same terms are also available on share secured loans.

ATS-3 Transmitting Weather Pictures

Weather pictures are again being received from the synchronous orbit Applications Technology Satellite-3 (ATS-3) after about a month in which no pictures could be transmitted because of a locked improperly phased antenna control system.

NASA officials believe the 805-pound spacecraft gets heated up when the Sun is north of the equator in the summer causing the drive or control system of the antenna to overheat and stop spinning. The antenna normally spins in the opposite direction the spacecraft spins and at almost the same speed to keep the antenna pointed toward Earth.

Now, although the spacecraft is still not working properly, it is transmitting cloud cover photos of the western hemisphere so important to the National Oceanic and Atmospheric Administration. These photos from ATS-3's "stationary" orbit at 70 degrees W. Longitude, 22,300 miles over Colombia, are especially useful to NOAA's weather forecasters at the National Hurricane Center in Miami.

The astrogram
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Editor . . . . . Dot Evans
Reporters . . . . . NASA Employees

Deadline for contributions:
Thursday between publication dates

Ames Airings

. . . by Jeanne Richardson

SONIA BERNARD, Computation Division, just returned from a tour of the Hawaiin Islands. She said she enjoyed this trip even more than her previous visits because this time she took a tour. And the tour was great, complete with a retired beach boy tour director.

DEL P. WILLIAMS, Materials Research, went home to Washington for a short visit two weeks ago. GEORGE DEIWERT, JOE MARVIN, both of Fluid Mechanics, and TOM COAKLEY, Hypersonic Aerodynamics, went back packing together up Immigrant Pass in Yosemite the last week in August. They had a great time, coming back with a lot of trout and sore feet. STUART BROWN, Systems Analysis, also went back packing recently.

BOB PIKE, Office of the Deputy Director, went to his cabin in the Sierras with his family last weekend. Bob was recently reminiscing about his boyhood days at his parents cabin on South Shore. According to Bob, when he was little Bobby Pike, he would climb on his sled at the top of the hill above Raleys Market - which of course wasn't there then - slide down through what is now Raley's parking lot, across Highway 50 and crash just short of the beach. He said he never had trouble getting across Highway 50 then, because cars only passed every hour or so. Hmmm, wonder if little Bobby read a lot of Paul Bunyon between sled rides.

ANDY BOGART, Materials Research, was at the San Francisco Airport September 9 and just barely missed an opportunity to bid Huey Newton farewell. Reporters and cameras got in the way. Huey was on his way south.

CHARLES MIDDAUGH, Classification and Organization, took a short trip up the coast to Oregon recently. HANS MARK, Director, and CHARLES W. (BILL) HARPER, Special Assistant to the Director, returned last week, well tanned, from a trip to the Adriatic Sea. They chartered two sail boats and leisurely sailed the Yugoslav coastline with their families.

WILLIE WHITE, Employee Development Branch, and his wife RUTHIE, Records Management, entertained several friends from the Personnel Division last weekend at a barbeque in their home. All those attending said the evening, which included a gourmet dinner and dancing, was a great success.

NASA FLYING CLUB . . . . Ames retiree Don Goodsell, president of the recently organized flying club is pictured above with Ames engineer, Betty Berkstresser. Betty, one of the many Ames employees who have joined the club, is taking flying lessons from Don. Other Ames flying students and members of the club are Sue Norman, Buzz Syle and Lou Williams, all of the Advanced Concepts and Missions Division.

Bicycle Club Forming

The Ames Bicycle Club is seeking new members. Persons interested in bike touring, camping, racing or formation of bike trails are welcome to join. A meeting will be held in the cafeteria on Sept. 22 at 4:30. A local bike expert will be present to talk on the advantages of various bikes, how to purchase a bike and on bike maintainence and repair. For information contact Mike Lovas at x 2420 or Wendell Love at x 2697.

BASKETBALL

Anyone interested in playing in the Ames Basketball League please contact Bruce Ganzler ext. 2747. Games will be played on Thursday nights at Sunnyvale High School.

Did you see the Palo Alto Times front page article on the daughter of TRIEVE TANNER, Human Performance? Dana, 10, sent a balloon up with her name and address attached to it from the Jordan Junior High School athletic fields in Palo Alto. That was in early July. On Aug. 30 a young girl in Wisconsin, over 2,000 miles away, found the remains of the balloon and the note in a tree and mailed them back to Dana with a slightly skeptical note.

Well, there won't be any hot pants in the Turf Club at Bay Meadows Oct. 2. According to the fine print on the "Ames Day at the Races" ticket, women in shorts are not permitted. Other info from same ticket; $6.75 with buffet luncheon.

SOFTBALL

The Fighting Pumas won the Ames Softball League championship for the third consecutive year by beating RFE 6-4 in the August 25 playoff game. The Pumas jumped off to an early 5-0 lead, then held on grimly as RFE narrowed the gap to 2 runs. But RFE's rally in the last inning fell short as alert Puma fielding picked off 2 base runners representing the tying runs.

The league homerun title was won by White of RFE with 7 homers. Fleet Mark Brown of the now-defunct I's was the runner-up with 5 round-trippers.

Full season standings were:

	W	L	T
Fighting Pumas	7	3	
RFE	7	3	
MFB	6	4	
Space Science	4	6	
Mighty I's	3	6	1
TGD	2	7	1

CONGRATULATIONS PUMAS!

JOGGERNEWS

The 61st annual Dipsea Handicap Race from Mill Valley to Stinson Beach was run on August 29 with 1135 runners finishing. The first Joggernaut to cross the finish line was Paul Sebesta, who placed 166, followed by Jim Woodruff, 167. Vito D'Aloia placed 195. Other Joggernauts to complete this classic were Tom Carson, Roger Hedlund, Donn Kirk, Art Mandell, Ted Passeau, and Dale Shute.

The next weekend Vito D'Aloia ran the 7.2 mile Emerald Hills Run, finishing 143 out of 239.

Then on Sunday, September 12 four Joggernauts, all past 40 years of age, completed the Double Dipsea from Stinson Beach to Mill Valley and back to Stinson Beach. The heat made this the most difficult race of the year. Several runners failed to finish. The Joggernauts and their finishing places were Jim Woodruff, 38; Dale Shute, 70; Ted Passeau, 74; and Vito D'Aloia, 84.

Dale Shute may be our best example of what jogging can do for a man. He looks better, feels better, and keeps improving his performance. He runs for fun, not to try to prove anything, and so far has avoided any problems of over stress.

For Sale-Dishwasher, 3 1/2 yr old deluxe model, stainless steel tub, solid state timer, waste king universal, $75, call M. Hansen, 252-8609.

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for Sale- 35 H.P. Outboard motor, Evinrude Lark, 1960, Electric starter, tank (6 gallon), remote controls, $250, call 656-6325.

For Sale or Trade-1 acre in mountains outside of Fresno, in subdivision with paved roads, electricity, water and no bonds or assessments. Asking $5400. Call 656-6325.

WANT ADS

The Astrogram's ad section is provided as a personal, non-commercial service to Ames employees. Advertiser must be identified by name, extension and organization. The name may be left out of the ad but is needed for records. Ads must be submitted in writing to The Astrogram, N 241-4, by Thursday, a week before publication. The advertiser's home telephone number must be provided as a point of contact except in carpool notices.

AUTOMOBILES

For Sale-Classic 51 Olds 4-dr. $200. Clean and runs well, radio/heater, new rubber windshield visor. See to appreciate. 969-1092 after 4:30.

For Sale-Chevelle '64 Semi Custom Call after 6 p.m. 226-3413 ask for Phil.

For Sale-68 VW black bug. Straight stick. Excellent condition. $1150. E. Hedstrom - 296-2844.

For Sale-1963 T-Bird Landau, excellent condition, all service records for you to see. Make Offer. Phone 941-4145.

For Sale-1970 Datsun 510 sedan. Excellent condition, 8000 miles. M. Resnikoff, 241-9833.

For Sale 1963 Falcon Futura, automatic trans. Radio Heater, new recaps. $400, call 267-2935.

For Sale-1976 VW Bug, 20,000 miles, $1600; and 1968 Cougar XR7, 41,000 mi., AT, PS, PB, $1650. Call Doran Klingler, 732-5714.

HOUSING

For Rent-Spacious 3-bedrm. 1-bath home in choice school, shopping, and people area. Nice enclosed backyard. Phone 241-0070 ask for "Betty". 1104 Johnson Ave. Available in Sept.

For Sale-2 acres, 18 mi. east of Klamath Falls, Oregon. Flat land, 1/4 mi. off county paved road. Graded road to property maintained by K.F. Forest Estates. Elec. pwr. hookup avail. Well must be dug for water. No building restrictions. $1,000 cash, Bill Rose 295-1939. 5 to 9 p.m. only.

For Sale-Los Altos. 1246 Windimer Dr. Excellent schools-Public and Parochial, neighborhood, location and transportation. 3-bdrm, den, 2 1/2 bath, lanai. $64,500 - owner 967-8501.

For Rent-Furnished 1-bdrm unit in 6-plex. Carpets, drapes etc. Excellent condition. Off Mathilda and East Maude. Near Ames. 418 Roosevelt, Sunnyvale $140, 739-6279 or 967-8501.

MISCELLANEOUS

For Sale-14.5' mahogony boat, 40 hp motor, trailer. $615. Excellent condition. Phone 245-3188 after 6 p.m.

For Sale-IRE/IEEE proceedings and transactions, back issues. Call 243-8963.

For Sale-Clarinet, wood, good condition, $35, call Dan Baty at 252-7849.

For Sale-Browning Automatic shotgun. Like new. 12 guage with 26 inch modified choke and 30 inch full choke interchangeable barrels. Stock fitted with shoulder pad. Case included. $160. Contact Demo Giulianetti -341-8676.

For Sale-Hedstrom convertible stroller. like new condition $15. Baby bed Antique white, posture pedic mattress, excellent cond. $10. Antique pitcher and bowl -large size, white $35. Call 259-4618.

For Sale-12" F/8 Newtonian telescope. Primary and flat are from cave optics (1/20 wave). $500. 262-5609.

Wanted-Additional members in a carpool. Depart Good Sam Hospital area 7:00. Arrive Ames 7:30. Depart Ames 4:20. Arrive Good Sam area same day with luck. If interested call L. Graham, x 2876.

Wanted-for reasonable price, baby crib in good condition. Chest of drawer, 4 or 5 drawers. Phone after 6 p.m., 257-7265.

For Sale-Rocking chair, needs some upholstering work $10. Call 243-8963.

Free-Kittens, your choice, black, grey striped, with and without white. From Good Home. 257-4110.

For Sale-Membership in Saratoga Country Club-736-7358.

Found-Five cartridges of exposed K-135, 6 mm Kodachrome II color slide film. Call E. Harper, ext. 2514.

For Sale-Tickets to Ames' Day at the Races, Bay Meadows. Only $6.75 for buffet luncheon and admission to Turf Club on Sat., Oct. 2. Purchase tickets from Kathleen Huffman, Bldg. 233-2 or Peggy Larson Bldg. 240-1.

For Sale-Gas stove, 40-inch chrome top, Wedgewood with griddle and separate oven and broiler. $65. Refrigerator/freezer combination. Amana frost free, 9-ft. refrigerator. 8-ft freezer, $250. Both in excellent condition, can furnish transportation. Jack Bonnell, 967-4286.

the astrogram

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Robert Pike Chairman of Ames C.F.C.

Robert L. Pike, Staff Assistant to the Deputy Director, has been named Ames Chairman of the 1972 Santa Clara County Combined Federal Campaign (CFC).

ROBERT L. PIKE

The campaign will begin Monday, October 4, and will continue through October 8. During that one week Ames employees will have an opportunity once again to share in the support of the many agencies which benefit each year from this community effort.

The CFC is the single annual drive conducted at Ames and other Federal agencies to obtain funds which help to support programs and services of the United Fund, the National Health Agencies, and International Service Agencies.

Contributions to the CFC benefit 119 voluntary agencies which are working to make the community and the Nation a better place in which to live. These agencies complement and reinforce tax-supported institutions in a manner that is vital to all. Their worthwhile efforts merit generous contributions from all Federal personnel and the continued support of all Ames employees.

"The needs of the agencies supported by the CFC are very real and deserve our thoughtful consideration", said Mr. Pike, discussing the forthcoming campaign. "In addition to the worthiness of the cause itself a secondary but very important consideration is the Center's involvement in activities of the surrounding communities. The degree to which we at Ames participate in the campaign is acknowledged by both the local communities and the federal establishments in this area. The campaign affords us the opportunity to assist the community in an activity recognized by community leaders both as necessary and meaningful."

Mr. Pike emphasized that, "giving should be considered a personal matter. No one can say how much an individual should give. We ask only that each employee participate and contribute as generously as possible."

Annual Awards Ceremony Oct. 20

The annual Honorary Awards Ceremony for Ames employees will be held in the Auditorium on Wednesday, October 20, at 2:30 p.m.

A special invitation is extended to all retired Ames employees to attend this annual event. A section will be reserved at the front of the Auditorium for the invited guests.

The program will include an address by Dr. Hans Mark, Ames Director, concerning Center activities, and the presentation of NASA length of service certificates and emblems to approximately 170 Center employees. Awards for 20, 25, 30, 35 35 years of Federal service will be presented.

Flying Simulator to Test Future Aircraft Concepts

Ames has completed acceptance tests on a vertical take-off and landing (VTOL) aircraft which can duplicate, or simulate, the hovering flight characteristics of most existing and proposed VTOLs.

The new NASA research aircraft, the X-14B, is a major modification of a veteran NASA-Ames VTOL research aircraft, the Bell X-14A.

The X-14B is believed to be the first digital-computer-driven VTOL flight simulator aircraft yet developed. It promises to be an important tool in VTOL aircraft research.

The conversion to flying flight simulator was performed by the Northrop Corporation, Hawthorne, under a $1.2 million contract.

The plane carries a small general-purpose, aircraft-type digital computer with a capacity of 16,000 16-bit data words. Into the computer are programmed the flight characteristics of the VTOL aircraft to be simulated. When researchers wish to convert flight characteristics of the X-14B to those of another aircraft, they simply put in a new computer tape.

A major part of the research planned with the plane will be to determine optimum handling qualities for any VTOL. Piloting a VTOL has been described as "like balancing on top of a huge beach ball in a rough sea." Hence handling qualities of these aircraft are critical.

"Because the X-14B can produce virtually all pilot-handling qualities for any VTOL," says X-14B project engineer, Frank Pauli, of the Ames Flight and Systems Research Branch.

The Ames researchers plan to use the X-14B to study several control systems previously developed in ground-based simulation. Future plans call for use of the airborne computer to simulate advanced systems designed to allow the pilot a choice of handling characteristics. Different characteristics would be selected depending on whether the pilot is in hovering flight or in the transition from vertical to horizontal flight. This idea can be extended further to systems that automatically select the best piloting characteristics for each type of flight.

Flight simulator aircraft extend the results of ground-based flight simulators. These ground-based devices are motion-generating machines which are "flown" down on the ground by research pilots. They are programmed by computer to duplicate the flight maneuvers of a wide range of aircraft. Designers use them to study piloting qualities of new aircraft in the early concept stage. Test maneuvers can be "flown" on the ground in a large building without hazard to pilots, and information can be gained far more cheaply than by building a prototype aircraft to test each proposed design. However, still further realism can often be obtained by flight simulator aircraft.

Like a ground-based simulator, the X-14B can duplicate the flight maneuvers of a wide range of aircraft. Since it can fly, its movements are not artifically restricted, and it can more realistically duplicate the piloting qualities of new airplanes.

FLYING SIMULATOR . . . The Ames X-14B vertical take-off and landing (VTOL) aircraft can duplicate, or simulate, the hovering flight of most existing or proposed VTOLs. The aircraft incorporates a computer which can be programmed to duplicate the flight characteristics of a wide variety of other VTOL aircraft.

Dr. Charles Sonett Presents Papers

Charles P. Sonett, Deputy Director of the Astronautics Division, presented a paper before the NATO Advanced Study Institute on Lunar Studies in Patras, Greece, September 18. The paper entitled "Electrical Properties of the Moon and its Interaction with Solar Winds", was based on his research with the lunar magnetometers. The Institute was attended by leading scientists from all over the world.

On October 8, Dr. Sonett will speak at the University of Calgary in Alberta, Canada on the "Recent Lunar Surface Magnetometer Measurements." He will discuss the properties of the moon's interior, as indicated by recent data returned by the Apollo 12 lunar surface magnetometer and the Ames Explorer 35 magnetometer.

L. Scherer Named Director of FRC

Lee R. Scherer has been named Director of NASA's Flight Research Center, Edwards, California. De E. Beeler, Deputy Director, who has been Acting Director of the Flight Research Center since April 7 of this year will continue as Acting Director until Oct. 11.

Mr. Scherer is presently responsible to the Director of the Apollo Program for the scientific aspects of Apollo lunar explorations. Prior to this he was Assistant Director for Lunar Programs, and Manager of the Lunar Orbiter Program since its inception in 1963 through its successful completion in 1967. Mr. Scherer returned from the Navy as Captain with 25 years of service in 1964 while on assignment to NASA and remained at NASA in a civilian capacity.

He was graduated from the U.S. Naval Academy in 1942 and received a Master's Degree in Aeronautical Engineering from the California Institute of Technology in 1950. He received NASA's Exceptional Service Award in 1967, and NASA's Exceptional Scientific Achievement Medal in 1969.

FORMS NOTICE

ARC Form 107 "Employee Termination Checkout Record" has been revised as of September 1971. Ames employees are requested to destroy all previous editions, they are now obsolete.

NASA-Ames Facilities To Aid FAA

The Federal Aviation Administration of the Department of Transportation and NASA announced Wednesday (September 29) the signing of an agreement for joint participation in flight simulation research and development projects at Ames.

"This joint venture will give FAA immediate access to the most technically sophisticated manned flight simulation laboratory for aeronautics existing today without any large capital outlays for new facilities, "FAA Administrator John H. Shaffer said. "As a result, we should realize substantial economies and increased efficiency with regard to research and development efforts of concern to both FAA and NASA.

"The two agencies have a common interest in conducting aeronautical research and development on a continuing basis, "Mr. Shaffer said. "Extension of aircraft operations into uncommon flight regimes will require an accelerated technological effort to provide for the safe introductions of advance designs into National Airspace System. The sharing of the flight simulation facility with NASA will better prepare us to meet these challenges."

In signing the agreement, Roy P. Jackson, NASA Associate Administrator for Advanced Research and Technology, stated that "this agreement is further indication of the continuing and increasing cooperation between the FAA and NASA. Joint use of the capabilities and resources of both agencies has greatly increased our ability to solve difficult aeronautical systems problems."

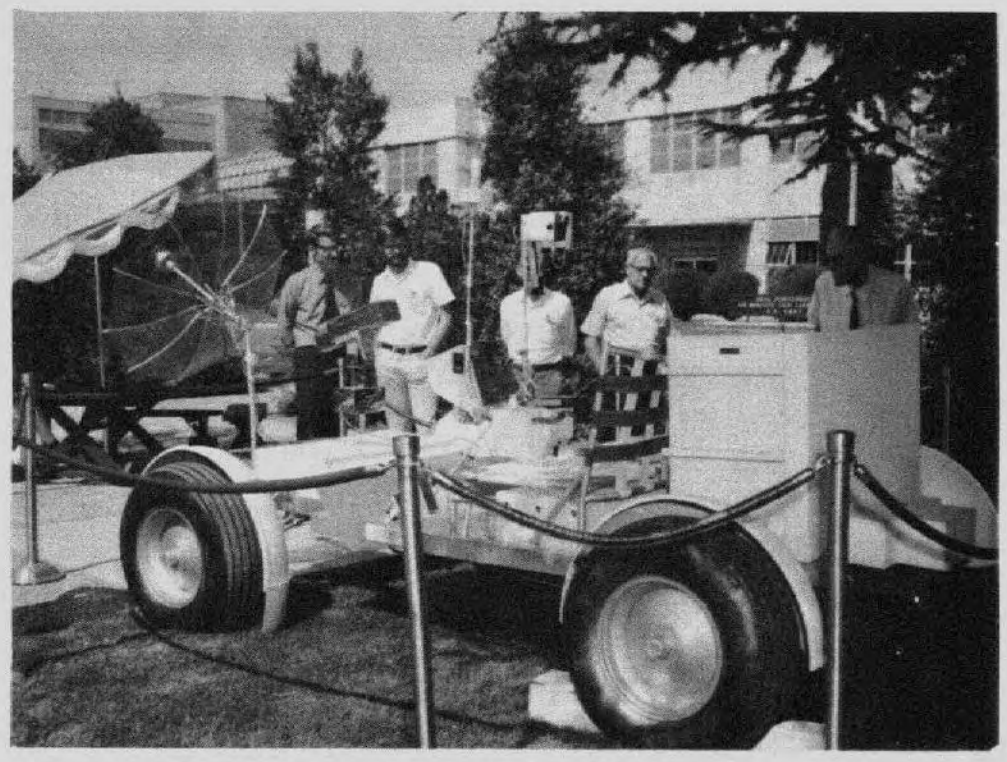
SIMULATION FACILITIES

Under the agreement, NASA will make the Ames simulation facilities and supporting services available to FAA for its own and for joint research and development projects. The FAA will provide its own technical personnel and Resident Director who will coordinate FAA R & D projects with Dr. Hans Mark, Ames Director.

Some of the FAA projects planned at Ames in the near future relate to the continuing study of aircraft such as the short take-off and landing (STOL) transport being developed for use by U.S. air carriers.

RETIREMENT DINNER

A retirement dinner honoring Virgil I. Force and James R. Neely of the Materials Processing Branch will be held at the Sunnyview Club, Mt. View, on Wednesday, October 15, at 7 p.m. Friends and fellow employees interested in attending may contact Ray Elam, Ext. 3016, Ralph Schlaegel or Bill Angwin, ext. 2234.



ON DISPLAY . . . A full-scale Lunar Rover model, a replica of the Apollo 15 Lunar Rover, was on display on the Ames cafeteria patio, Sept. 16-17. It was viewed by many Ames employees during the lunch breaks, five of whom were caught by Ames photographer, Emerson Shaw's camera.

While visiting Ames the Rover underwent repair at the model shop between shows at Cal Expo and the L.A. County Fair.

PREVENTION BEST PROTECTION

Fire Prevention Week, Oct. 3-9

The week of Oct. 3-9 has been designated Fire Prevention Week by President Nixon. The week will be observed at Ames with efforts to inform employees in fire prevention and safety procedures. The Safety Office also will conduct "general housekeeping" actions in fire prevention with the NAS Fire Department.

CHECK EXTINGUISHERS

John Habermeyer, Safety Officer, has asked that all fire extinguishers be checked. If the seal, a thin braided wire with a small lead "sinker" near the top of foam and dry chemical extinguishers, is broken the extinguisher should be considered inoperative. All inoperative extinguishers should be reported to Gerald E. Hall, extension 3196, Mechanical Services Branch.

BURN TREATMENT

While discussing Fire Prevention Week, Mr. Habermeyer mentioned a treatment for burns which he had taught and used for several years and which has recently been adopted by the Red Cross. The treatment is simply cold water.

Cold water has long been known as a means of relieving the pain of burns. Recently it was also recognized as a means of "healing" burned tissue.

The theory behind the treatment is; If burned tissue is immediately immersed in cold water it will cool quickly, preventing further damage to the skin. If cold towels or water is not applied, the skin will retain the heat of the initial burn for some time, allowing further damage. Mr. Habermeyer cited several incidents where serious damage had been avoided by quick application of cold water.

For information on fire prevention and burn treatment, contact John Habermeyer, Safety Officer, extension 2988, Bldg. 241, Room 130.

The Astrogram
Room 134
Admin. Mgt. Building
Phone 2385

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Editor . . . . . Dot Evans
Reporters . . . . . NASA Employees

Deadline for contributions:
Thursday between publication dates

Good Data From Ames Magnetometer

The Ames Lunar Surface Magnetometer placed on the moon in late July during the Apollo 15 mission has returned excellent lunar magnetic field data continuously as the moon circles the Earth.

The instrument is an improved version of a similar instrument placed on the moon during the Apollo 12 mission, and which a year later continues to operate about 40 percent of each lunar day. Both instruments were developed by Ames scientists; Dr. Charles P. Sonett, Deputy Director of Astronautics; Dr. Palmer Dyal, Special Projects Office; and Dr. Curtis W. Parkin, Theoretical Studies, and were built by Philco-Ford Corporation in Palo Alot.

Data from the two instruments, along with local magnetic field measurements made during the Apollo 14 mission and data from a small satellite left in lunar orbit during the Apollo 15 mission, are being studied in an effort to learn more about the origin and composition of the moon.

Electric currents circulate deep beneath the lunar surface every time there is a sudden change in the solar wind magnetic field which sweeps entirely through the moon. The magnetometer detects the weak magnetic fields induced by the moon's internal current flows. From the frequency content and manner in which these fields decay after the arrival of each burst of energy from the sun, new deductions are being drawn regarding some of the moon's deep structural features hundreds of kilometers beneath the surface.

Ames Employees Voted to AIAA Posts

Several Ames employees were recently elected as committee members and officers of the San Francisco Section of the American Institute of Aeronautics and Astronautics boasts a membership of 1,200, of whom 200 are Ames employees.

OFFICERS ELECTED

Recently elected officers and directors from Ames are; Richard H. Peterson, Aeronautical Missions, Vice-Chairman; Mamoru Inouye, Computational Fluid Dynamics, Secretary; John V. Rakich, Hypersonic Aerodynamics, Chairman of the Advisory Board; Melvin R. Watson, High-Enthalpy Research, Technical Affairs Director; J. Lloyd Jones, Jr., Office of the Director, Nominations Director. Committee members from Ames are; George S. Deiwert, Fluid Mechanics and John R. Viegas, High-Enthalpy Research on the Membership Committee; and Victor Corsiglia, Large-Scale Aerodynamics, on the Program Committee.

The Section will meet at Ames on Oct. 7. The agenda is:

6 p.m.-Social Hour in cafeteria
7 p.m.-Dinner
8:30 p.m.-Apollo Movie in Auditorium
9 p.m.-Lecture by Dr. William L. Quaide

Advanced reservations are required. For information call ext. 2121 by Tuesday, Oct. 5.

Members interested in taking an active role in Section activities and prospective members are urged to contact one of the officers or directors.

THREE TECH BRIEF AWARDS . . . were presented to Robert D. Lee (left), Electronic Research Branch, during a recent ceremony. C.A. Syvertson (right), Ames Deputy Director, made the presentation with the assistance of Esperanza Pereida (center) a summer employee who worked in the Center's Technology Utilization Office under the Neighborhood Youth Corps Summer Program. Mr. Lee, one of 29 employees receiving Tech Brief awards, was recognized for his "Intruder Detection System", "Metal Detector System," and a miniature implantable instrument which measures and transmits heart function data.

"Aviation In The 70's" 6-Week Symposium

A special six-week symposium entitled "Aviation in the 70's" will be offered at Branham High School, 1570 Branham Lane in San Jose beginning Sept. 30. The symposium which will meet each Thursday night from 7:30 to 9:30 p.m., is sponsored by NASA, the Federal Aviation Association and the Metropolitan Adult Education Program.

Ames scientists will conduct four of the meetings which are designed for the layman. Anthony Cook, Office of the Director of Aeronautics and Flight Systems, will speak on Ames' research program in Short-Take-Off-and Landing (STOL) transports and long-haul transportation. Jay V. Christensen, Guidance and Navigation, will conduct the second session on, "What kinds of systems (Independent Landing Monitor) are being developed to help pilots guide the next generation of aircraft."

The third meeting will focus on "New Trends in Flight Simulation", and will be conducted by George A. Rathert. Next in the series will be a meeting devoted to "Safety and Accident Prevention" led by an F.A.A. official.

The fifth session will deal with "Long Range Forecasts for General Aviation." Hubert Drake, Aeronautics Division, will be the speaker.

The last session will be devoted to a tour of Ames, including the wind tunnels, simulators and other facilities related to the interest of the class.

Awards Presented For DOT-NASA Study

Sixty-nine certificates of appreciation have been presented in connection with the recent study of civil aviation designed chiefly to reduce aircraft noise and airport-area congestion. Fifty-seven were received by individuals and 12 by groups.

The study, recommended by Congress, was made jointly by DOT and NASA, with assistance from the Department of Defense, Civil Aeronautics Board, and eight other Federal agencies. A special advisory committee from the National Academy of Engineering provided representation from the nation's airline, airport, aerospace, academic, and financial sectors. C.A. Syvertson, Deputy Director of Ames, served as chairman.

Among other things, the study concluded that aircraft noise abatement deserves the highest priority because of widespread concern for the environment and because the success of the noise-abatement program will affect the solution to aviation's other problems. It was recommended that time-phased research goals be established, seeking reductions of at least 10 decibels each 10 years until aircraft noise is suppressed into community background noise.

The certificates were awarded to the following Ames individuals:

Charles W. Harper, Office of the Director; Hubert M. Drake, Aeronautics Division; Gerald E. Nitzberg, Office of the Deputy Director; Richard H. Petersen, Aeronautical Mission; C.A. Syvertson, Deputy Director; Jeanette Louis, Technical Services Division.

Group awards were presented to the Ames Manuscript, Graphics and Exhibits, and Reproduction Services Branches.

ORIENTAL CULTURE

Chinese Fair

A Chinese Cultural Fair featuring oriental entertainment, exhibits, demonstrations, and games will be held Sunday, October 3, from 11 a.m. to 4 p.m. at Cubberly High School Pavilion, 4000 Middlefield Road, Palo Alto.

Co-sponsored by the Stanford Area Chinese Club and the Multicultural Education Office of Palo Alto Unified School District, the day's events will include folk dancing, arts and crafts show, kite making, miniature gardening, tea tasting, mandarin and cantonese cookery, and elephant checkers.

Performances of the folk dances, Gung Fu (the art of self-defense), and oriental exercises called Tai Chi, will be held from 2:30 to 4 p.m.

Donations are 50¢ for adults and children 12 years of age and under, 25¢. Tickets may be purchased from Guy Wong, Los Altos Hills, 941-1939.

BICYCLE CLUB

. . . by Mike Lovas

The first meeting of the bicycle club was held recently and attracted twenty-five Ames employees.

The members heard Bob Hackinger of Lockheed's Pedelera Wheelemen talk on the organization of his club and Pat Heitkum of the Triple-E Cyclery in Mountain View, who talked about items to look for in good bikes and how to maintain bikes.

The interest of those present seemed to be oriented toward touring. Because of this, it was decided that the club would publish a newsletter containing a compendium of the various cycling activities conducted by other clubs in the area.

One of the first activities available for members is a wine-tasting-cycling tour in the Napa valley on Oct. 10. The preliminary information on the tour is that it will be about 25 miles round trip, include stops at two wineries (Charles Krug and Christian Brothers), stops at a cheese and salami shop, and at the Olive Oil Manufactory, where a variety of palate-pleasing delicasies can be purchased.

Full details of this tour will be sent to everyone signed up in the club, but anyone desiring further details or who may wish his name added to the club list, can contact Mike Lovas, ext. 2420, mail stop 245-7.

Ames Airings

. . . by Jeanne Richardson

The following notice, clipped from a newspaper, was sent to the Astrogram" office by HOWARD A. STINE, Chief of the High-Enthalpy Research Branch. "Bosses Day, when bosses are supposed to be taken to lunch by their secretaries and otherwise pampered, will be nationally observed Friday, Oct. 15, so start saving your money, secretaries." JOAN RZUCIDLO, High-Enthalpy Research, are you listening?

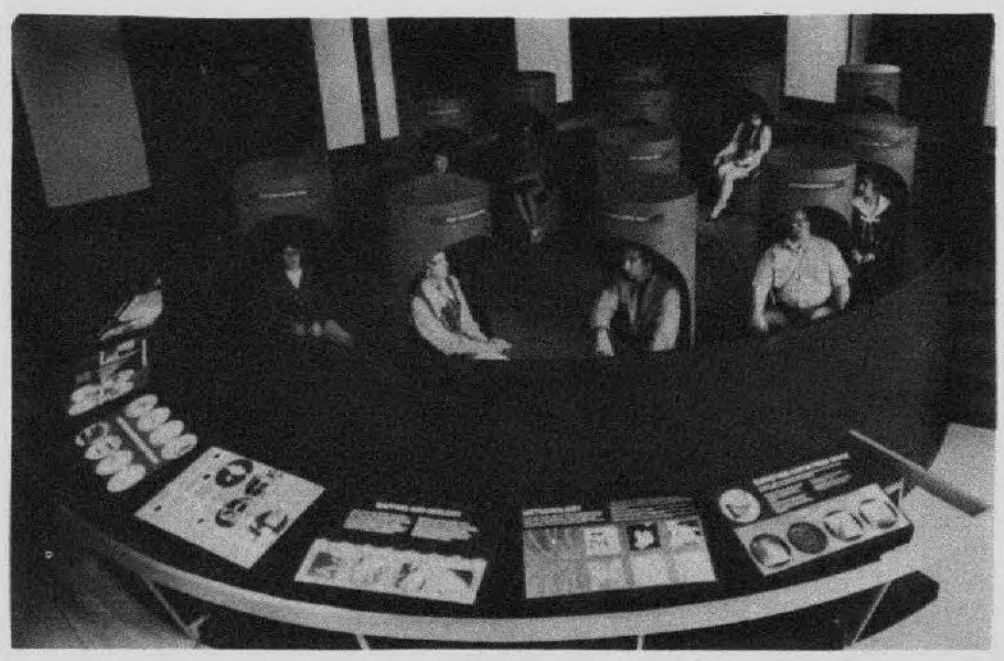
ALBERTA ALKSNE, formerly of Theoretical Studies, has been keeping in touch from Africa with the gang from Ames through letters circulated around various divisions. In the Photo Branch EMERSON SHAW noticed the letter excerpted below and suggested that Ames personnel could possibly help Alberta and her students. Alberta by the way is teaching through the Peace Corps.

"10, Sept., 1971, Eldoret, Kenya. . . . As it is I'm so busy with Maths & Physics that I've no time to complain of anything. The Maths part is pretty easy, really, but the books aren't very good -- it is "New Maths" -- and since the book doesn't explain anything it throws a load on the teacher. Also there aren't enough exercises in the book to give the students adequate practice. But Physics! Three or four different books and none of them very good! No good suggestions for laboratory experiments. So I have to dig around for equipment and try it to see if it will illustrate what I want to teach. Usually it won't without modification. There is a lab. assistant who knows where things are -- but of course he doesn't know what I want so we both look for it. And it has been so many years since I was in a high school Physics Lab. -- I don't even remember what we tried to do. Seems to me we had a printed "Lab Manual" and it would sure help.

Next time you send me a letter in an ordinary envelope can you slip in a few sheets of single-cycle semi-10g paper? Neither the school nor the stationers has any. I think with that and some reasonably smooth pieces of wood I could devise usable slide rules -- the school can't afford them. (15 shillings each for 30 girls for just one class) (Ed. note: one shilling is worth 14¢ U.S. currency) The girls did make some paper slide rules with just ordinary graph paper but that was pretty frustrating. I couldn't get along without my slide rule -- since I have no IBM."

Emerson's idea is to collect any old slide rules or appropriate text books and send them to Alberta. If you have any items that could be used please contact Emerson at Building 203, Room 101, N 203-6.

To all of those who will be leaving Ames next week, "We'll miss you - and good luck."



BENEFITS FROM SPACE . . . A model of the Apollo command module and an Apollo 11 lunar sample weighing 117 grams will be on display at the Marin County Fair from October 8 to 11. There will also be a special exhibit called "Benefits from Space" which will illustrate the various ways NASA research has benefitted American life. The exhibit features individual chairs equipped with stereo recordings which relate the contributions of space research to specific occupations. The chairs, pictured above, range in interest from teenagers and students to doctors, lawyers, teachers and builders.

WANT ADS

The Astrogram's ad section is provided as a personal, non-commercial service to Ames employees. Advertiser must be identified by name, extension and organization. The name may be left out of the ad but is needed for records. Ads must be submitted in writing to The Astrogram, N 241-4, by Thursday, a week before publication. The advertiser's home telephone number must be provided as a point of contact except in carpool notices.

AUTOMOBILES

For Sale-1963 Merc. Comet, convertible, 6-cyl., 4-speed, nice condition $325. 967-0896, after 5 p.m.

For Sale-1963 MGB Rdstr., Radio, wire wheels, good condition, best offer, call 374-2631 after five.

For Sale-1968 Pontiac LeMans, 350 Eng., r/h, power steering, new tires, good condition, call 266-0251.

For Sale-1970 Toyota Hilux Truck, white w/black inter., 110 h.p., overhead cam., bardon bumper, r/h excellent condition with 12,000 miles. Call 266-0251.

For Sale-1970 Datsun 510, 2-door, automatic transmission, excellent condition, 8000 miles. $1730, or see and offer. Call 241-9833.

For Sale-1965 Valiant, auto V-8, 2-door, r/h. Great mechanical condition, 2 new tires. $595. Call Pearson, 257-0483, day or evening.

For Sale-1959 Porsche, Conv.-D., white. 1600S. Chrome wheels, many extras, $1400. Call 968-6290.

For Sale-1959 Austin-Healy, 100/six, two seater, w/ factory hardtop, new paint, good mechanical cond. Wire wheels, $700. O. Jorgensen, DA 8-8756, evenings.

MISCELLANEOUS

For Sale-Rhododendrons, starting second group order. Be ready for spring by ordering your new plants now. Great savings by pooling buying power. All types and colors. Call Bob George, 257-4110.

For Sale-Mini Bike, Bonanza, fair/good condition, with 3 1/2 h.p. Tecumseh engine, Jack Shaft Drive, rear wheel brake and good tires. $50. Palo Alto, 322-6557.

For Sale-Shop or garage heater, very large capacity, 200,000 BTU's. Can be used for smaller area by using smaller pipe. Very good condition $40. Call 656-6325.

For Sale-Siamese kittens, male Lilac. Registered and pedigreed. $45 rare. Also Osterizer blender, cost $50, sell for $25. Used carpet, apprx. 12x20 great for cabin, $30 with pad. Teflon waffle iron, used twice, extra large size, $15. Call 253-4475.

For Sale-Trumpet and case, fine for school band. $40, 736-2621.

For Sale-Craftsman electric edger-trimmer. Original price $45, will sell for $25 with 8 months left of original warranty. Call 244-8114.

For Sale-12" F/8 Newtonian telescope, primary and flat are from Cave Optics (1/20 wave) $500, 262-5609.

For Sale-Deer rifle, Springfield 30.06, good cond. Call D. Sinnott, 225-8043.

For Sale-Two mediterranean style barrel chairs, white wood with red velvet upholstery and wicker backs, $25 each. Norge gas dryer, well used, $15. Refrigerator 14 cu. ft. with freezer cmpt. $25. Walnut stereo component cabinet 72" long. $100. Call 252-4749.

Free-Part Persian kittens, 5 wks. old, box trained. 248-5546.

For Sale-350 CI, 1969 Honda, 6000 miles, good condition. See to appreciate, $500. Phone, 854-2950.

For Sale-Two large aluminum windows and frames, good for cabin or remodeling, $10 each. Large dog house, $8. Two carpets, 13x 20 royal blue shag, $30, 13x13 grey tone-one-tone, $25. Y. Russell, 252-8316 after 4 :30.

For Sale-PLEASE, I need a ride to and from Ames from Saratoga area. My hours are 8 a.m. to 4:30 p.m., 257-0511.

For Sale-1 pair professional citizens band transceivers (walkie-talkie) 6 channel clairoon model, 15-600 5 watt, 27MH2 with batteries and charger. Never used. Value $210, will sell for $175. Call 364-0782 after 6 p.m.

For Sale-Travel Trailer, 1968 Airstream, 30 ft, air conditioned, large refrig., double bed, vista windows, immaculate, 961-4720.

HOUSING

Wanted-Small 1 or 2 bedroom house to rent, unfurnished, fenced-in yard. 961-6835.

For Sale-12' x 60', 2-bedroom Mobile home in elegant Sunnyvale Adult Park, includes 8' x 16' porch, patio, awnings, carport, 3-ton central air conditioning, wall to wall carpets and all original furnishings. Must see to appreciate. Call 734-2519 after 6 p.m.

For Rent-1/4 interest in luxurious cabin on Doner Lake for four winter months. Close to all north end ski areas. All electric kitchen, 2-full baths, new carpeting, fireplace, large deck over lake, private bedrooms, etc. $75/month for one couple. Phone 865-4299 after 6 p.m.

For Sale-2 1/2 acres in Calif. City, appraised at $10,500, must sell, $8000. 262-5609.

For Rent-Tahoe City cottage near lake and private beach area. Sleeps 6. Autumn rate $70/wk or $30/wknd. 328-4642.

For Sale-1960 Karmann Ghia Convertible, 68,000 miles. Rebuilt 1964 engine, $500. Call John Van Etten, 274-2736.

For Sale-California Youth Symphony concert tickets One ticket good for one adult and two children to three concerts, either at Flint Center, De Anza College or San Mateo High School for concert season 1971-72. Ticket cost $5. Tax deductible sponsorships available, starting at $15 with two free tickets. Call 948-0705.

For Rent-Milpitas, Parktown, 3-bedrm, 2-bath, deck, refrig, dishwshr., water pad. $235/mo. - 248-6777 or 263-0795.